### **DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 13.28

# WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-014525 Address: 333 Burma Road **Date Inspected:** 02-Jun-2010

City: Oakland, CA 94607

OSM Arrival Time: 1000 **Project Name:** SAS Superstructure Prime Contractor: American Bridge/Fluor Enterprises, a JV **OSM Departure Time:** 1830

Contractor: Oregon Iron Works Clackamas, Or. **Location:** Clackamas, OR

M. Gregson, J. Salazar, G. Mundt CWI Present: **CWI Name:** Yes No

**Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No N/A

**Delayed / Cancelled:** Yes No

34-0006 **Bridge No: Component:** Hinge K Pipe Beams

#### **Summary of Items Observed:**

The Quality Assurance Inspector Sean Vance arrived on site at Oregon Iron Works, Inc (OIW) in Clackamas, OR, to randomly observe the in process welding of the Hinge K Pipe Beam assemblies. The QA Inspector arrived on site to randomly observe the OIW Quality Control (QC) Inspectors in process and completed visual and nondestructive testing. Upon the arrival of the QA Inspector the following observations were made:

## Hinge-K Pipe Beam Assembly 101A-4:

The QA Inspector observed a production helper grinding on the Partial Joint Penetration (PJP) weld joints # W2-01, W2-02, W2-17, W2-18, W2-19 and W2-20. The QA Inspector observed that the helper was utilizing a hand held mechanical, Makita brand grinder with an attached 9" circular disc. The QA Inspector observed that OIW QC Inspectors had previously marked these completed weld joints during final visual inspection, for weld cap reinforcement which exceeds the maximum allowable of 3 mm, per AWS D1.5.

The QA Inspector observed the helper randomly checking the areas which were ground with a bridge cam gauge. The QA Inspector noted that these weld joints were the a106/ab106 HPS 485 W stiffeners to a109/a110 Post Tension Cap and Base plate. The QA Inspector also observed the helper performing grinding on the Post Tension and Base plate flame cut edges, which were previously marked by OIW QC Inspectors.

The QA Inspector observed that OIW QC Inspector Jose' Salazar was present on this shift and QC Inspector Salazar explained that Final Visual and Magnetic Particle testing will be performed on the PJP's, after production completes the grinding.

The QA Inspector was present on this swing shift and observed an OIW production helper grinding on the above mentioned PJP's. The QA Inspector observed that OIW QC Inspector Gary Mundt was present and QC Inspector Mundt explained that excessive reinforcement which was previously marked by OIW QC Inspectors, was being

## WELDING INSPECTION REPORT

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removed.

#### AG Machine Works (Boring, OR)

On this date, the QA Inspector arrived at AG Machine Works to witness the final machining, on this Fuse 120A-8. Upon arrival, the QA Inspector observed that the Fuse was slowly rotating in a horizontal lathe and final machining was in process. The QA Inspector observed that AG Machinist Terry Schmale was present at the time and Mr. Schmale explained that the first cut was in process, approximately 95 % complete. Mr. Schmale explained that OIW Machinist Matt Ackerson had arrived on 5/27/10 to verify lathe set-up and had released, for AG to start machining. Mr. Schmale explained that this first machining cut was started on 5/28/10 and the cutting depth was approximately 7 mm and explained that a second and third cut pass will be required, to machine to the top end of the required tolerance.

The QA Inspector noted that the contract requires a final finished outside diameter of 1920 mm (+/- 1mm). See attached pictures below.

Material, Equipment, and Labor Tracking (MELT)

QA Inspector Sean Vance performed a verification of material, personnel and equipment involved with the project. The QA Inspector observed at Oregon Iron Works Clackamas: 4 OIW production personnel and 2 QC Inspectors. The QA Inspector observed at AG Machine Works: 1 Supervisor and 1 Machinist.





## **Summary of Conversations:**

As noted above.

#### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916) 813-3677, who represents the Office of Structural Materials for your project.

Inspected By:	Vance,Sean	Quality Assurance Inspector
Reviewed By:	Adame, Joe	QA Reviewer